

STATE OF MINNESOTA  
OFFICE OF ADMINISTRATIVE HEARINGS

FOR THE DEPARTMENT OF LABOR AND INDUSTRY  
OCCUPATIONAL SAFETY AND HEALTH DIVISION

In the Matter of Steve Sviggum, Commissioner, Department of Labor and Industry, State of Minnesota,  Complainant,  v.  McGough Construction,  Respondent.	<b>FINDINGS OF FACT, CONCLUSIONS AND ORDERS</b>
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This matter was heard by Administrative Law Judge (ALJ) Richard C. Luis at the Office of Administrative Hearings in St. Paul on December 3, 4, 5 and 11, 2008. The record closed on April 16, 2009.

Rory H. Foley, Assistant Attorney General, appeared on behalf of the Commissioner of the Department of Labor and Industry (Complainant). Edward Q. Cassidy and Lori-Ann C. Jones, Fredrikson & Byron, P.A., appeared on behalf of McGough Construction (Respondent).

**STATEMENT OF ISSUE**

Did the Respondent violate 29 C.F.R. § 1926.703(a)(2) by failing to have revised shoring and formwork plans for the third floor available at its work site in Maple Grove, Minnesota, on June 1, 2007, and if so, what penalties are appropriate?

The Administrative Law Judge has decided that the Complainant has not proven by a preponderance of the evidence that the Respondent violated 29 C.F.R. § 1926.703(a)(2) on June 1, 2007.

Based on the proceedings herein, the Administrative Law Judge makes the following:

## FINDINGS OF FACT

1. McGough Construction ("McGough") is a Minnesota-based general construction company. It has been in business for 53 years.<sup>1</sup>

2. In 2007, McGough was acting as the general contractor on the construction of a new five-story headquarters building for the Great River Energy Company (GRE), located in Maple Grove, Minnesota.<sup>2</sup>

3. On June 1, 2007, McGough was pouring concrete on the third floor of the GRE headquarters building when the third floor northeast corner panel, between grid line S and T, collapsed onto the second floor deck below. McGough had poured approximately 399 cubic yards of concrete and had one cubic yard left to pour when the collapse occurred. Eight McGough employees and one subcontractor employee were injured.<sup>3</sup>

4. No cause for the collapse was determined.

5. Following the accident, the Minnesota Department of Labor and Industry's Occupational Safety and Health Division (MnOSHA) conducted inspections of the site and the accident. MnOSHA issued an Inspection Report, which included one citation containing two items.<sup>4</sup> The first item was settled by the parties. The remaining item alleged a "willful" violation of 29 C.F.R. 1926.703(a)(2) for not having revised drawings or plans for the third floor shoring and formwork available at the job site.<sup>5</sup> MnOSHA assessed a \$35,000 penalty for this item. McGough contests the remaining citation item and penalty.<sup>6</sup>

6. In order to determine the severity level of an alleged violation and the associated penalty, MnOSHA's Field Compliance Manual directs MnOSHA to consider a variety of evidence and several factors. Before a violation may be classified as willful, MnOSHA must determine that the employer had specific knowledge of the OSHA requirement or of the particularly hazardous working condition to which the employees were being exposed. The action or lack of action by the employer who has specific knowledge determines the degree of the willfulness.<sup>7</sup>

7. While the building was in the planning stage, the owner, Great River Energy, decided to remove a column from the second floor in the northeast corner of the building in order to create more space for large conference rooms.<sup>8</sup> The column

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<sup>1</sup> Transcript Vol. 2 at 14.

<sup>2</sup> Vol. 2 at 14.

<sup>3</sup> Vol. 4 at 85; Exs. 2 and 3.

<sup>4</sup> Ex. 2.

<sup>5</sup> Ex. 3.

<sup>6</sup> Ex. 3.

<sup>7</sup> Exs. 3 and 6.

<sup>8</sup> Vol. 2 at 53-54.

was located at grid point S1.<sup>9</sup> Removal of the column on the second floor was repeated on the remaining (third, fourth, and fifth) floors.<sup>10</sup>

8. The removal of the S1 column presented a structural issue regarding how best to carry the load of the building that the column would have carried.<sup>11</sup> The structural engineer of record for the project was BKBM Engineers.<sup>12</sup> The structural engineer introduced a post-tension concrete cantilever beam to support the span where the column originally had been.<sup>13</sup> The beam was introduced from grid line Q1 to T1.<sup>14</sup> Post-tension is a method of reinforcing concrete by draping cables throughout the area where the concrete is to be poured. Once the concrete is poured, the cables are stressed to create compressive strength.<sup>15</sup>

9. In order to pour concrete on an elevated floor, formwork, supported by shoring from beneath, is used to support the concrete until it has set.

10. Aluma Systems (Aluma), a Canadian company, manufactures shoring systems that are commonly used in pouring concrete.<sup>16</sup>

11. McGough used a shoring system developed by Aluma on the GRE construction project, known as the “high flying shoring system.” McGough became the first contractor in the country to use this system in 1976. This system allows for the assembly, shoring, and installation of the support formwork necessary to pour concrete decks for each level. It also allows for the use and repetitive re-use of these forms on a construction site, avoiding the costly dismantling and re-assembly of the forms as each floor is constructed.<sup>17</sup> In addition, once the concrete deck is poured and set, the system allows for the entire flying form panel to be “stripped” or dropped onto a roller system, rolled out of the building, and picked up by a crane to be moved to the next floor to be used again.<sup>18</sup>

12. Since 1976, McGough has placed tens of thousands of yards of concrete and developed extensive expertise using Aluma’s shoring systems and its internal communication protocols.<sup>19</sup>

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<sup>9</sup> The plans show grid lines A to T and 1 to 5. The area at issue was located between grid lines Q to T, and 1 and 2.

<sup>10</sup> Id.

<sup>11</sup> Vol. 2 at 55.

<sup>12</sup> Vol. 2 at 72.

<sup>13</sup> Vol. 2 at 55-56.

<sup>14</sup> Vol. 2 at 62.

<sup>15</sup> Vol. 2 at 56-57.

<sup>16</sup> Vol. 2 at 15.

<sup>17</sup> Vol. 2 at 11-17, 122.

<sup>18</sup> Id.

<sup>19</sup> Vol. 2 at 16.

13. Aluma also created the formwork shop drawings or shoring plans for the GRE Project, to detail the assemblage of the formwork for the placement of cast-in-place concrete.<sup>20</sup>

14. It is common industry practice to make field modifications to shop drawings that improve efficiency and strength. Such modifications occur on a regular basis during the construction process and do not require the submission of a "RFI" (Request for Information) to the engineer of record for clarification.<sup>21</sup>

15. Unlike shop drawings, modifications to contract documents, such as the structural and architectural drawings, do require the formal submission of an RFI to the engineer of record for clarification.<sup>22</sup>

16. Aluma assigned Trip Hagstrom, an Aluma salesman, as McGough's contact person or representative for jobs, including the GRE project.<sup>23</sup> Mr. Hagstrom is not a structural engineer.<sup>24</sup>

17. On past projects, McGough always contacted Aluma's designated representative whenever there were issues or questions that developed as the shoring was being placed or used.<sup>25</sup>

18. No one at McGough ever contacted an Aluma engineer directly. Direct contact with the structural engineer went against protocol at Aluma and in the construction industry, generally.<sup>26</sup>

19. Aluma issued a set of shop drawings dated February 20, 2007, for the GRE Project. In this set, the formwork plans for the second and third floor were identical for the area between grid line 1-Q to T and grid line 2-Q to T.<sup>27</sup> This set also provided for a balcony on the second floor that had its own shoring system.<sup>28</sup>

20. On February 26, 2007, Aluma issued revised shop drawings for the second floor.<sup>29</sup> The revisions concerned the shoring scheme and were approved, signed and issued by the structural engineer, Ellie Ashton, at Aluma Systems.<sup>30</sup>

21. The revisions were shown on the drawing in a bubbled or clouded area, reflecting the changes in the supporting formwork from column jacks to shoring towers

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<sup>20</sup> Vol. 2 at 69.

<sup>21</sup> Vol. 2 at 73-81.

<sup>22</sup> Vol. 2 at 70-76.

<sup>23</sup> Vol. 3B at 76.

<sup>24</sup> Vol. 1 at 77.

<sup>25</sup> Vol. 3B at 57-58, 76; Vol. 4 at 18.

<sup>26</sup> Vol. 3B at 57-58, 76; Vol. 4 at 18.

<sup>27</sup> Vol. 2 at 92-94; Exs. 7 and 8.

<sup>28</sup> Vol. 1 at 145; Ex. 13.

<sup>29</sup> The shoring plan has two dates: February 26, 2007. The revision was dated and the engineer signed it on February 26, 2007, but the issue stamp is February 27, 2007. See Exhibit 9 and Vol. 2 at 95. The record uses both February 26 and 27 dates interchangeably.

<sup>30</sup> Ex. 9; Vol. 2 at 95-100.

on the grid line between points Q1 and T1.<sup>31</sup> It is common practice in the industry when issuing revised drawings to draw a “cloud” around the revisions to indicate the area on the drawing where the plans have changed.<sup>32</sup>

22. No deviation was made in the revised plan issued February 26, 2007 for the shoring scheme on the grid line between points Q2 and T2.<sup>33</sup> On the February 26, 2007 revised plan were stamped the words, “DESTROY ALL PREVIOUS PRINTS.”<sup>34</sup>

23. In implementing installation of concrete according to Aluma’s shop drawings as written, McGough ran into problems stripping the second floor split panels.<sup>35</sup>

24. A panel is a compilation of beams and poles that are assembled in a rectangular fashion with plywood over the top used to hold the concrete in place until it has set and hardened.<sup>36</sup>

25. Panels are held vertically in place by a shoring system, such as shoring towers or column jacks, as indicated on the plans.<sup>37</sup>

26. Panels on the shop drawings were designated A3, A4, A5, etc.<sup>38</sup> One panel would be built for all the designated A5 work in the building for efficiency.<sup>39</sup> The same typical A5 panel was then used on the second floor, and on the third floor, and everywhere else that called for an A5 panel.<sup>40</sup>

27. To “strip” a panel, the construction crew removes or releases the support from under the panel to drop the panel onto a high-strength roller system. The panel is then rolled out of the building, picked up by a crane and moved to the next floor to be used again.<sup>41</sup>

28. A split panel is not built monolithically in one piece. It is split into two equal pieces.<sup>42</sup>

29. It was necessary for the A5 panel between grid lines S and T to be a split panel because the weight of the monolithic panel exceeded the lifting capacity of the stationary tower crane at that reach.<sup>43</sup>

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<sup>31</sup> Ex. 9; Vol. 2 at 97-99.

<sup>32</sup> Vol. 2 at 97-98.

<sup>33</sup> Vol. 2 at 99-100.

<sup>34</sup> Ex. 9; Vol. 2 at 95-96.

<sup>35</sup> Vol. 4 at 45-53.

<sup>36</sup> Vol. 2 at 109.

<sup>37</sup> Exs. 7, 9 and 12.

<sup>38</sup> Vol. 2 at 109.

<sup>39</sup> Vol. 2 at 110.

<sup>40</sup> Vol. 2 at 110-111; Ex. 10.

<sup>41</sup> Vol. 2 at 112-114, 122.

<sup>42</sup> Vol. 2 at 112, 115-116.

<sup>43</sup> Vol. 2 at 112; Vol. 4 at 76.

30. The tower crane was located in such a manner that it had to remove the south side of the split A5 panel first during the stripping process.

31. According to the plan, in order to get the north half of the A5 panel to where the tower crane could reach it, the north half had to be moved fifty-five feet south, in order to clear the structure and be “flown” to the next floor level.<sup>44</sup>

32. Aluma’s formwork shop drawings designed the shoring for the north half of the split panel to be set 14-inches lower than the south half.<sup>45</sup> The shoring that was used on the south half of the A5 panel was elevated 14 inches higher than the shoring used on the northern half and ultimately was in the way of moving the north half of the panel south by 55 feet.<sup>46</sup>

33. In order to strip the north half of the A5 panel between grid lines S and T on the second floor, the north half panel had to be moved south onto elevated shoring that was 14 inches higher than the shoring it had been on. McGough employees moved it one corner at a time, transferring the panel from the lower elevated shoring tower to the higher one.<sup>47</sup> During the stripping process, at various points in time, part of the north half panel would be raised higher until the rest could be moved to that height.<sup>48</sup>

34. Stripping the A5 panel between grid lines S and T was made more complicated and dangerous because the north half of the A5 panel weighed approximately 10,000 pounds and was elevated seventeen feet in the air.<sup>49</sup> Men were working beneath the formwork to move the panels and McGough feared that the north half panel would fall on the men below.<sup>50</sup>

35. Patrick Linder, the carpenter foreman, was in charge of stripping the formwork.<sup>51</sup> Stripping the formwork from the A5 split panel on the second floor made Mr. Linder feel physically ill because of the potential for physical danger that was involved.<sup>52</sup>

36. Once Mr. Linder realized the danger involved in stripping the split panel, he stopped work to talk to Fred Swenson, the job superintendent. Mr. Linder and Mr. Swenson discussed the problems associated with stripping the split panel on the second floor and attempted to devise a safer process to use on floor three.<sup>53</sup>

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<sup>44</sup> Vol. 4 at 53.

<sup>45</sup> Vol. 4 at 163, 168.

<sup>46</sup> Vol. 4 at 53.

<sup>47</sup> Vol. 4 at 169.

<sup>48</sup> Vol. 4 at 169.

<sup>49</sup> Vol. 4 at 49-53.

<sup>50</sup> Vol. 4 at 164-165.

<sup>51</sup> Vol. 4 at 165.

<sup>52</sup> Vol. 4 at 166.

<sup>53</sup> Vol. 4 at 164-171.

37. Mr. Linder and Mr. Swenson then met with Pat Steinberger, another superintendent, and Lonnie Rosen, a senior carpenter, to discuss what could be done about this extremely hazardous problem.<sup>54</sup>

38. Collectively, this group had 100 years of construction experience among them. After discussing the problem, the group devised a plan to lower the shoring used on the south half of the split panel on floor three to the same level as the shoring on the north half, and to “tie” (bolt) the two halves together.<sup>55</sup> This plan became known during the hearing as “the idea.”

39. The group proposed “the idea” of lowering the south half of the third floor’s A5 panel between grid line 1, S and T, 14 inches to match the elevation of the north half as a way to avoid the hazardous situation caused when stripping the second floor.<sup>56</sup> The idea also called for the south half of the A5 panel on floor three to be cribbed up to look identical to the north half of the panel.<sup>57</sup> Once the north and south half of the panel sat at the same elevation, “the idea” called for the panels to be bolted together making it easier and safer to strip.<sup>58</sup>

40. Mr. Swenson called Mr. Hagstrom at Aluma to discuss the feasibility of “the idea.”<sup>59</sup> Mr. Swenson discussed “the idea” with Mr. Hagstrom for about five minutes on the phone.<sup>60</sup> Mr. Hagstrom thought it was a great idea and approved its implementation.<sup>61</sup>

41. The McGough crew believed that lowering the south half of the A5 panel to match the level of the north half panel on the third floor would reduce the hazards and risk involved in moving the panel by 80 percent.<sup>62</sup>

42. Implementation of the idea had an effect on the shoring plan outlined in Aluma’s formwork shop drawings.<sup>63</sup> The shop drawings called for column jacks to be used in lieu of shoring towers between grid line Q2 to T2 on the third floor. Column jacks are a type of formwork used to support panels.<sup>64</sup> Column jacks are bolted to the column by running a sleeve through a column in a pre-engineered location with the proper rebar around it before the concrete is poured.<sup>65</sup> The columns on grid 2 had already been poured to accommodate the column jacks.<sup>66</sup>

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<sup>54</sup> Vol. 4 at 56 and 171.

<sup>55</sup> Vol. 2 at 126-130; Vol. 4 at 56; Exs. 13 and 15.

<sup>56</sup> Vol. 2 at 128-135; Vol. 4 at 57.

<sup>57</sup> Vol. 2 at 75-78, 128-135; Vol. 4 at 57-65.

<sup>58</sup> Vol. 2 at 139; Vol. 4 at 60-65.

<sup>59</sup> Vol. 4 at 58-59.

<sup>60</sup> Vol. 4 at 60.

<sup>61</sup> Vol. 4 at 59-60.

<sup>62</sup> Vol. 2 at 146; Vol. 4 at 58-59.

<sup>63</sup> Vol. 2 at 147; Vol. 4 at 66.

<sup>64</sup> Vol. 2 at 147-148.

<sup>65</sup> Vol. 2 at 152.

<sup>66</sup> Vol. 4 at 64-65.

43. Once “the idea” of installing the split A5 panel at the same elevation on the third floor was implemented, the column jacks for shoring grid line 2 on that floor, between points S and T, were no longer useable because the column jack holes were too high and inaccessible.<sup>67</sup> Column jack holes are pre-engineered and cannot be changed or drilled in later.<sup>68</sup>

44. When he realized that the crew could not use column jacks along grid lines 1 and 2 on the third floor, between points Q and T, Mr. Swenson called Mr. Hagstrom twice more, to get approval for field modifications pertaining to grid lines 1 and 2, respectively. The field modifications were to use the revised shoring scheme that had been approved on February 26, 2007 (for use along grid line 1 on the second floor) on the third floor along grid lines 1 and 2, between points Q and T.<sup>69</sup> Mr. Hagstrom approved implementation of the revised second floor shoring plan (substituting shoring towers for column jacks on grid line 1, from points 2Q to 2T) for application along grid line 1 on the third floor during the earlier call, and along grid line 2 on the third floor during a follow-up call.<sup>70</sup>

45. Part of the Respondent’s reasoning behind the field modification for grid line 2 on the third floor A5 panel was based on the fact that grid line 2, from point 2Q to 2T, would not have to bear the additional weight of the beam to be installed on grid line 1 (26.5 tons), so that if shoring towers were strong enough to support the weight on grid line 1, which included a 26.5-ton beam, they would be strong enough to support the weight on grid line 2.<sup>71</sup>

46. McGough used Aluma’s revised formwork shop plans in Exhibits 9 and 13 to implement “the idea.”<sup>72</sup> Aluma’s formwork shop plan had already detailed how to shore an A5 panel in that manner and that plan for the A5 panel was on the construction site.<sup>73</sup>

47. The changes implemented by the McGough crew to the third floor shoring scheme after talking with Mr. Hagstrom, while approved by Aluma Systems engineer, “E. Ashton,” for use on the second floor,<sup>74</sup> were not approved expressly, either orally or in writing, by Ms. Ashton for use on the third floor.<sup>75</sup>

48. On June 4, 2007, Ms. Ashton and MnOSHA Senior Safety Inspector Michael Bymers inspected the collapsed building section, then being reassembled in an adjacent area known as the “boneyard.”<sup>76</sup> Ms. Ashton determined that McGough had

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<sup>67</sup> Vol. 2 at 148-149; Vol. 4 at 65.

<sup>68</sup> Vol. 2 at 152-153, 160.

<sup>69</sup> Ex. 9; Vol. 2 at 161-162; Vol. 3B at 7; Vol. 4 at 66-69.

<sup>70</sup> Ex. 9; Vol. 4 at 66-71.

<sup>71</sup> Vol. 2 at 162; Vol. 3A at 9-10; Vol. 4 at 70, 184.

<sup>72</sup> Vol. 4 at 62-66.

<sup>73</sup> Vol. 2 at 140-142.

<sup>74</sup> Ex. 9.

<sup>75</sup> Ex. 4.

<sup>76</sup> Ex. 4.



deviated from the “approved application drawings” for the third floor.<sup>77</sup> Ms. Ashton detailed these deviations in an undated letter to Mr. Bymers.<sup>78</sup> The deviations Ms. Ashton noted included:

1. Hi-Flyer column jacks were not used at columns located at grids T1, T2, S2, and R2.
2. Shoring towers were substituted for the column jacks at Columns T1, T2, S2, and R2. These towers were not centered under the castelite beams but were located in such a manner as to eccentrically load the towers. Although this condition could not be visually observed due to the inability to clearly see the towers under the collapsed equipment, a bay to the west, between Q & R and 1 & 2, was setup in the same eccentric fashion and the re-shoring equipment below grids S & T and 1 & 2 confirms that this eccentric loading condition was occurring above.
3. Panels type B1 and A5 (split panels) were not used at the locations indicated on the application drawing in the two bays bound by gridlines R and T and 1 and 2. These panels were specifically designed for the 24 inch deep beam condition with transverse trusses spaced at 4 on centre under the beam.
4. Full length, 48 long panels were used in place of panels B1 and A5.
5. There was no evidence that the end brackets attached to the panel in the East bay bound by grids 1, 2, S and T were posted as indicated on the application drawing, section G on drawing 8551-07.

49. The deviations noted by Ms. Ashton reflect McGough’s decision to implement “the idea” and apply the revised second floor shoring plan to the third floor, such as substituting shoring towers for column jacks at grids T1, T2, S2, and R2. These deviations were carried out with Aluma’s approval to minimize a hazard. In addition, partly because certain conditions could not be visually verified due to the collapse, Ms. Ashton speculated incorrectly that the shoring towers were eccentrically loaded in contradiction to the plan (the plan actually provided for eccentrically loaded shoring towers on the third floor), that split panels were not used, and that end brackets were not posted.<sup>79</sup>

50. McGough’s use of the approved revised shoring plans for the second floor to shore the third floor is consistent with industry practice. Using the approved shoring plan and repeating it for the upper levels of the GRE building is customary practice in the construction industry because level two was “typical” to levels three through five.<sup>80</sup>

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<sup>77</sup> Ex. 4; Ex. 8; Vol. 3B at 10-15.

<sup>78</sup> Ex. 4.

<sup>79</sup> Ex. 4; Ex. 8; Respondent’s Closing Brief at 21-23.

<sup>80</sup> *Secretary of Labor v. Fabi Construction Inc.*, 21 OSHC 1595, 1603 (2006).

A “typical” detail is one that is applied repetitively throughout a project where the conditions are the same.<sup>81</sup>

51. Up until the day he testified in the hearing in this matter, MnOSHA Inspector Bymers mistakenly believed that the third floor of the GRE building had a balcony and that this balcony caused the third floor to have a greater building load capacity than the second.<sup>82</sup> As a result, Mr. Bymers believed that the second and third floors were not “typical” and that the revised shoring plan for the second floor could not be repeated for the third floor. In fact, the balcony was on the second floor and it had its own separate shoring plan. Consequently, the second floor was “typical” to the other floors and the approved revisions to its shoring plan (Ex. 9) could be repeated on the third floor.<sup>83</sup>

52. The third floor was a typical floor in the GRE project.<sup>84</sup> The building was a repetitive structure.<sup>85</sup>

53. The panels are a typical condition as they were configured in a repetitive manner on all the floors.<sup>86</sup>

54. The cantilever beam between grid points Q1 and T1 is a typical condition on the second, third, fourth and fifth floor supportive slabs in the building.<sup>87</sup>

55. The swing and picking radius for the tower crane is a typical condition for each floor.<sup>88</sup>

56. The February 26, 2007 shoring scheme on Exhibit 9 for the second floor grid line between points Q1 and T1 was a typical condition that occurs on the second, third, fourth and fifth floor and was intended to be reused in those locations.<sup>89</sup>

57. The February 26, 2007 shoring scheme was a typical (repeating) condition on each floor along the grid line between Q2 and T2, and on each floor in the area between grid lines 1 and 2.<sup>90</sup>

58. There was no difference in the load on grid line 1-Q to T, between the second and third floor, as the design is identical.<sup>91</sup>

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<sup>81</sup> Vol. 1 at 135-136; Vol. 2 at 82-83; Vol. 3A at 8-9; Vol. 4 at 23, 98-99; Ex. 10.

<sup>82</sup> Vol. 1 at 143-144.

<sup>83</sup> Vol. 1 at 74-75, 143-145; Vol. 3A at 7-10; Vol. 3B at 20-22; Exs. 7, 9, 13.

<sup>84</sup> Vol. 2 at 83.

<sup>85</sup> Vol. 2 at 85.

<sup>86</sup> Vol. 1 at 160-161; Vol. 2 at 84-89; Vol. 4 at 23.

<sup>87</sup> Vol. 2 at 90.

<sup>88</sup> Vol. 1 at 163-165.

<sup>89</sup> Vol. 3A at 7-8; Vol. 3B at 20-21.

<sup>90</sup> Vol. 1 at 149; Vol. 3B at 21; Vol. 4 at 67-78, 180-81.

<sup>91</sup> Vol. 2 at 144.

59. There was no difference in the load on grid line 2-Q to T, between the second and third floor, as the design is identical.<sup>92</sup>

60. The February 26, 2007 formwork shop drawing with the revised shoring scheme for the second floor was readily available on the GRE jobsite.<sup>93</sup>

61. On June 4, 2007, Mr. Bymers arrived at the GRE jobsite and asked the McGough representative for the formwork shop drawing plan set.<sup>94</sup> McGough produced the plan set with the revisions and Mr. Bymers reviewed that plan set.<sup>95</sup>

62. Aluma's formwork shop drawings were kept on site in the GRE job trailer.<sup>96</sup> Plans were made readily available for employees.<sup>97</sup> In the GRE job trailer, blueprint machines were available to print copies of the plans.<sup>98</sup>

63. Mr. Swenson did not perceive any risk or hazard in repeating the shoring scheme approved for use in the area between grid lines Q to T and 1 to 2 on the second floor in the same area on the third floor (between grid lines Q to T and 1 to 2).<sup>99</sup>

64. Mr. Swenson believed at all times that he was complying with the relevant OSHA requirements because he had an approved shoring plan which he used to shore the third floor.<sup>100</sup>

65. Mr. Linder did not perceive or express any concern or hazard in using "the idea." Instead, he believed "the idea" would minimize a dangerous hazard for the employees.

66. Nothing in the record suggests that any McGough employee expressed concerns or believed that implementing "the idea" was potentially hazardous or risky.<sup>101</sup>

67. MnOSHA inspector Bymers was not aware of any facts that showed or tended to suggest that there were warnings from any employee on the GRE site about a hazard related to using the approved shoring plan for the second floor on grid line 1-Q to T on the third floor.<sup>102</sup>

68. McGough provides safety and emergency action training programs to its employees, including "OSHA 10", and was awarded the Minnesota Safety Council Award of Excellence, commonly known as the Governor's Safety Award, in 2004, 2005,

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<sup>92</sup> Vol. 2 at 145.

<sup>93</sup> Ex. 9; Vol. 3B at 20.

<sup>94</sup> Vol. 1 at 69.

<sup>95</sup> Vol. 1 at 69-70; Vol. 3B at 58.

<sup>96</sup> Vol. 4 at 24.

<sup>97</sup> Vol. 4 at 24.

<sup>98</sup> Vol. 3B at 58; Vol. 4 at 94.

<sup>99</sup> Vol. 4 at 71.

<sup>100</sup> Vol. 4 at 71.

<sup>101</sup> Vol. 3A at 10.

<sup>102</sup> Vol. 1 at 183-185; Vol. 1 at 209.

2006 and 2007.<sup>103</sup> Prior to June 1, 2007, McGough had 1.4 million man-hours without a lost-time accident.<sup>104</sup>

69. The Complainant cited McGough for a willful violation of 29 C.F.R. § 1926.703(a)(2) and assessed a \$35,000 penalty. A willful violation is one “committed with intentional, knowing or voluntary disregard for the requirements of the Act or with plain indifference to employee safety.”<sup>105</sup>

Based on the Findings of Fact, the Administrative Law Judge makes the following:

### **CONCLUSIONS**

1. The Administrative Law Judge and the Commissioner of Labor and Industry have jurisdiction in this matter pursuant to Minn. Stat. §§ 14.50 and 182.661, Subd. 3.

2. The Department gave proper notice of the hearing in this matter and has fulfilled all relevant procedural requirements.

3. The Respondent is an employer as defined by Minn. Stat. § 182.651, Subd. 7.

4. The Complainant has the burden of establishing by a preponderance of the evidence the occupational safety and health violation charged in this matter and the appropriate penalty.

5. A “willful” violation is one committed with intentional, knowing, or voluntary disregard for OSHA requirements or with plain indifference to employee safety.<sup>106</sup>

6. 29 C.F.R. § 1926.703(a)(2) requires that: Drawings or plans, including all revisions, for the jack layout, formwork (including shoring equipment), working decks, and scaffold shall be available at the jobsite.

7. The Complainant has failed to establish by a preponderance of the evidence that the Respondent did not have revised shoring and formwork plans for the third floor of the GRE building available at the jobsite.

8. The Complainant has failed to demonstrate by a preponderance of the evidence that Respondent violated 29 C.F.R. § 1926.703(a)(2) and that the violation was willful.

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<sup>103</sup> Vol. 2 at 22.

<sup>104</sup> Vol. 2 at 22-23.

<sup>105</sup> *Valdak Corporation v. ORHRC*, 73 F.3d 1466 (8th Cir. 1996).

<sup>106</sup> See *Dakota Underground Inc. v. Secretary of Labor*, 200 F.3d 564, 566-67 (8<sup>th</sup> Cir. 2002); *Valdak Corporation v. ORHRC*, 73 F.3d 1466 (8<sup>th</sup> Cir. 1996).

Based on the Conclusions, and for the reasons in the accompanying Memorandum, the Administrative Law Judge makes the following:

### ORDERS

1. Citation 1, Item 2, issued for a violation of 29 C.F.R. § 1926.703(a)(2), is **VACATED**.
2. The penalty of \$35,000.00 imposed by Citation 1, Item 2, is **DISMISSED**.

Dated: May 18, 2009

/s/ Richard C. Luis  
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RICHARD C. LUIS  
Administrative Law Judge

Reported: Janet Shaddix and Associates  
Transcripts Prepared

### NOTICE

Notice is given that under Minn. Stat. § 182.664, subd. 3, this decision may be appealed to the Minnesota Occupational Safety and Health Review Board by the employer, employee, their authorized representatives, or any party, within 30 days following the service by mail of this decision. The procedures for appeal are set out at Minn. R. 5215.5000-5215.5210.

### MEMORANDUM

Following the collapse at the GRE building, MnOSHA cited McGough for failing to have a copy of the revised plans for shoring the third floor deck, that included changes to the formwork and shoring equipment, on-site and available for inspection as required by 29 C.F.R. § 1926.703 (a)(2). MnOSHA classified this citation as a “willful” violation pursuant to the factors set forth in the MnOSHA Field Compliance Manual and Citation Rating Guide.

In order to establish a violation of a specific OSHA standard, the Complainant must show by a preponderance of the evidence that (1) the cited standard applies to the alleged condition; (2) the terms of the standard were not complied with; (3) employees had access to the violative condition; and (4) the employer knew or could have known of the violative condition with the exercise of reasonable diligence.<sup>107</sup> In this instance, the

<sup>107</sup> *Seibel Modern Mfg. & Welding Corp.*, 15 BNA OSHC 1218, 1221-22 (No. 88-821, 1991); *Astra Pharmaceutical Products, Inc.*, 1981 OSHD CCH 25,578 (1981), aff’d in part, rev. in part, 681 F.2d 69 (1<sup>st</sup> Cir. 1982).

Complainant must also establish that the violation was willful, as the term is defined for OSHA enforcement, and that the Complainant correctly calculated the appropriate penalty for the violation.

29 C.F.R. § 1926.703 sets forth the requirements for cast-in-place concrete. 29 C.F.R. § 1926.703 (a)(2) provides:

*(a) General requirements for formwork*

Drawings or plans, including all revisions, for the jack layout, formwork (including shoring equipment), working decks, and scaffolds, shall be available at the jobsite.

It is undisputed that the cited standard applies in this case. It is also undisputed that McGough had a copy of the revised plans for the second floor, including changes in formwork and shoring equipment, available at the work site. (Ex. 9). The record established that McGough used this approved revised drawing for the second floor (Ex. 9) as the shop drawing for the third floor shoring and formwork scheme. McGough maintains that its use of the revised second floor shoring plan for the upper floor levels was appropriate and consistent with industry practice because level two of the building was “typical” to levels three through five. A “typical detail” in an approved plan is one that reflects a repeating condition or configuration and may be applied consistently without specific approval from the project engineer. McGough contends that because the second floor shoring plan was applicable to the upper levels and because the plans were available at the job site, it should be found to have complied with the cited OSHA standard. The Administrative Law Judge agrees.

The Administrative Law Judge is persuaded that no violation occurred in this instance, because the revised shoring plan approved for the second floor reflected a “typical detail” that could be applied and repeated on the upper floors. The record establishes that the plan approved for pouring concrete on the A5 panel on the second floor, including the shoring scheme for the second floor along grid line 1-Q to T, constitutes a typical condition that occurs on the second, third, fourth, and fifth floor that was intended to be repeated in those other locations. The same was true for the shoring scheme, approved by Ms. Ashton on February 26, 2007, to be used on gridline 2-Q to T, because gridline 1 and gridline 2 are typical, repeated conditions or details on each floor.

The Complainant has not shown that there were any differences of significance in the third floor that made the second floor plan, as finally approved, inapplicable to other floors. The Complainant’s witness, MnOSHA inspector Michael Bymers, agreed that the areas between points Q1, T1, Q2, and T2, on the second and third floors, show repeating or typical conditions.<sup>108</sup> Mr. Bymers agreed also that the cantilever beam at gridline 1 between Q and T occurs at the same place on the second, third, fourth and fifth floors and is a typical detail or repeated condition on all floors.<sup>109</sup> He agreed further

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<sup>108</sup> Vol. 1 at 149.

<sup>109</sup> Vol. 1 at 156-158.

that various panels (A1, A2, A3, A4, A5) were repeating detail configured the same for all floors.<sup>110</sup> Finally, when it was pointed out to him that the balcony was on the second floor with its own separate shoring plan and not on the third floor as he had mistakenly believed, Mr. Bymers conceded that there were few differences between the second and third floors.<sup>111</sup>

The reasoning in *Secretary of Labor v. Fabi Construction, Inc.*,<sup>112</sup> is instructive in this matter. Fabi Construction was a contractor for a large construction project on which four levels of a parking garage collapsed. OSHA issued two citations, one of which alleged a violation of 29 C.F.R. § 1926.703 (a)(2) for not having shoring plans available at the site for levels P3-P8. The OSH Commission ultimately found that the Secretary of Labor failed to establish that the employer had violated that standard and vacated the citation. The Commission found that the shoring plans, labeled as applicable to floor P2, specifically applied to levels P3-P8 because the same plan was to be repeated for each of the upper levels. The Commission noted also that that type of shoring plan was customary in the industry and did not create any hazard.

The evidence in this case established that it was customary to make the same adjustments as shown on an initial (revised) drawing (in this case for the second floor) to represent the typical details that would be repeated on all floors. The fact that, in this case, the drawing showing the revisions for the second floor was not specifically labeled as a “typical detail” is immaterial, because it is undisputed that all of McGough’s employees understood the drawing in that way.

As did Fabi Construction, McGough had the shoring plans readily available on the jobsite. The evidence established that when Mr. Bymers arrived at the GRE jobsite to investigate the collapse, he asked for and received the formwork shop drawing plans, including the revised shoring plans issued February 26, 2007.<sup>113</sup> The plans were kept in a field trailer on the GRE jobsite,<sup>114</sup> and McGough had blueprint machines available to print copies of the plans if necessary.<sup>115</sup>

The record established that “the idea” implemented by McGough was the result of a collaborative decision by McGough employees to devise a plan that would eliminate the hazardous condition encountered while stripping the A5 split panel on the second floor. “The idea” consisted of lowering the south half of the A5 panel between points S1 and T1, by 14 inches to match the elevation of the north half on the third floor. In order to aid in implementation of “the idea” on the third floor, McGough used the revised shoring plans designed for the second floor between points S1 and T1 as shown on Exhibits 9 and 13, and made approved field modifications to those plans (bolting the halves of the A5 panel together after matching them up, and supporting the panel with shoring towers along grid lines 1 and 2).

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<sup>110</sup> Vol. 1 at 160-161.

<sup>111</sup> Vol. 1 at 144-146.

<sup>112</sup> 21 OSHC 1595 (2006).

<sup>113</sup> Vol. 1 at 69-70; Vol. 3B at 58; Exs. 9 and 13.

<sup>114</sup> Vol. 4 at 24.

<sup>115</sup> Vol. 4 at 94.

The perceptions and beliefs of McGough's project manager (Tim McGough), job superintendent (Fred Swenson) and carpenter foreman (Patrick Linder), to the effect that there was no risk or hazard in implementing "the idea", as noted at Findings 63-65, were reasonable in the circumstances. Linder believed using "the idea" on the job site improved the safety of the shoring by 80% in the area of concern on the third floor. It was logical for both to reason: (1) that grid line Q1 to QT on floor 3 was identical to the same grid line on floor 2, so that the revised shoring plan, approved for use on the second floor in Aluma's shop drawing of February 26, 2007 (Exhibit 9), could be repeated on the identical gridline above, without the need to receive a drawing of the same detail labeled specifically for use on floor 3; and (2) that the same shoring scheme approved to support gridlines Q1 to T1 on each floor, grid lines that carried 26.5 tons more weight because of the cantilever beam than grid lines Q2 to T2 on each floor, would support the structure between Q2 and T2 on each floor. For those reasons, and because of his perception that Mr. McGough, Mr. Swenson and Mr. Linder were credible witnesses, the ALJ concludes the beliefs and opinions expressed by McGough's witnesses regarding the safety of implementing "the idea" were genuine, as well as reasonable.

The record shows that McGough followed protocol by consulting with Aluma's representative, Tripp Hagstrom, prior to implementing "the idea." Mr. Hagstrom enthusiastically endorsed the idea. The record shows also that it was not necessary or consistent with common industry practice to contact Ellie Ashton, the engineer for Aluma Systems, to get her separate approval for field modifications relating to the implementation of "the idea".<sup>116</sup> The testimonies of Tim McGough, Pat Linder and Fred Swenson were credible regarding these points of protocol and practice.

Because the revised shoring plan approved for the second floor constituted a "typical detail" that could be applied and repeated on the upper floors and because these revised plans were available on the job site, the Complainant failed to prove that McGough violated 29 C.F.R. § 1926.703(a)(2) by not having specific revised shoring plans for the third floor available at the job site. Therefore, the citation at issue is vacated and the penalty dismissed.

**R. C. L.**

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<sup>116</sup> Vol. 3B at 76.